LOIS HUGHES.

Clearwing Swallowtail (*Cressida cressida cressida*)

Butterfly & Other Invertebrates Club Inc. Newsletter

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CLUB PLANNING AND ORGANIZING GROUP - 2003

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PLANNING AND ORGANIZATION MEETINGS

A quarterly meeting is scheduled in order to plan club activities and the newsletter. See BOIC Programme.

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AIMS OF ORGANIZATION

- To establish a network of people growing butterfly host plants;
- To hold information meetings about invertebrates;
- To organize excursions around the theme of invertebrates e.g. butterflies, fireflies, ants, dragonflies, beetles, freshwater habitats, and others;
- To promote the conservation of the invertebrate habitat;
- To promote the keeping of invertebrates as alternative pets;
- To promote research into invertebrates;
- To encourage the construction of invertebrate friendly habitats in urban areas.

NEWSLETTER DEADLINES

If you want to submit an item for publication the following deadlines apply:
March issue – February 21st   June issue – May 21st
September issue – August 21st   December issue – November 21st

COVER DRAWING

The Clearwing Swallowtail or “Big Greasy”(*Cressida cressida cressida*) by Lois Hughes.

PRESIDENT'S POSTING

Hello and welcome to our 32nd issue. This issue contains several excellent examples of how amateurs can make significant observations and discoveries. In particular the observations regarding the Blue Triangle egg-laying habits and Tachinid flies are worthy of note. Also Bob Miller's discovery of osmeteria in the White-banded Plane, subsequently included in Michael Braby's "Butterflies of Australia", is highly significant. Osmeteria are well-known from some species in the Swallowtail Family (Papilionidae). This is believed to be the first time that they have been recorded in the Nymphalidae. Congratulations Bob. Our Club and our newsletter provide a good vehicle for reporting these observations and discoveries.

On another note, groups like ours thrive or die on the efforts of the volunteers who contribute at all levels, including helping the group function. An important part of this functioning is the holding of an Annual General Meeting. Ours is scheduled for the 3rd April. Please support us to help make our collective work possible. Attending the AGM is an important way of showing your support.

Helen Schwencke

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The Clearwing Swallowtail or "Big Greasy" (*Cressida cressida cressida*)

The last but definitely not least of the ten swallowtail butterflies found in South-east Queensland, is the Clearwing Swallowtail (*Cressida cressida cressida*).

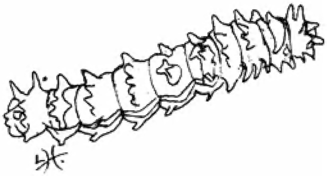
One of the things that makes this such a fascinating insect, is that after the male has mated with the female, he leaves what is called a "sphragis" attached to her abdomen, this prevents other males from mating with her, effectively ensuring the success of his gene pool.

To look at, the male of this butterfly resembles the Dainty Swallowtail (*Papilio anactus*). The female, although similar in design to the male, appears to have no wing scales. This makes it look "greasy", hence the earlier popular name, Big Greasy.

The male has a wingspan of approximately 80mm. This makes it slightly larger than the female, which has a wingspan of approximately 70mm.

The male has a transparent greyish forewing with a small, black basal patch close to the body and with two black spots in the "cell" area, close to the "costa" or leading edge of the forewing. The hind wing is black with a broad white band running through the centre with five red spots around the outer edge. The body is black with a red tip to the abdomen. The underside is identical to the upperside with the exception of the red spots, which are brighter.

The female is a transparent pale brown. It has one black spot on the forewing and a darker brown margin on the hind wing, with five pale brown spots. The underside is very similar to the upperside.

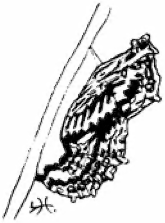


Larva of the Clearwing Swallowtail

The eggs of this butterfly are orange in colour and are laid mainly on the underside of the leaves of its host plant, which locally is a species closely related to *Aristolochia pubera,* a low growing vine found further north, mainly in the dryer, hilly areas where there is surface rocky rubble or scree.

The larvae are a reddish-brown with creamy markings and have fleshy tubercles. Quite often you will find them nowhere near their foodplant. This is because the *Aristolochia* is generally so small, the larvae devour it in no time and so have to go in search of more food.

The pupa is always suspended by the tail and a silken girdle around its waist usually to a nearly vertical object. This can be a branch, or even a blade of grass, sometimes metres away from the foodplant. It is an overall caramel colour with cream markings



Clearwing pupa

This butterfly's flight is usually slow and fluttering and fairly close to the ground. This is especially so with the females as they search out the vine on which to lay their eggs.
To obtain this vine will take a bit of searching, as only specialist nurseries would stock it.

Further information about this butterfly can be had by referencing *"Butterflies of Australia, their Identification, Biology and Distribution"* by Michael Braby, 2000, or *Butterflies of Australia* by I. Common and D. Waterhouse, 1981.

Bob Miller

PLANT PROFILE

Cressida Pipeflower - *(Aristolochia* sp. D'Aguilar Range (=*A*. sp. aff. *pubera*)

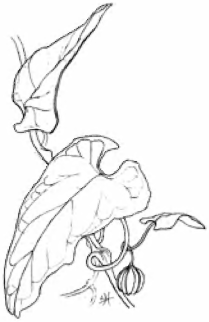
HOST BUTTERFLY: Clearwing Swallowtail *(Cressida cressida cressida).*

HEIGHT: In the wild, I have not seen this plant grow taller than 30cm.

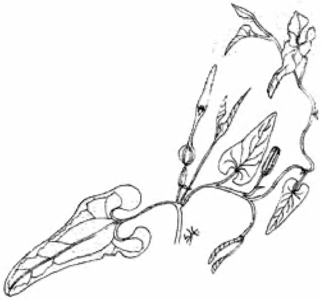
SHAPE: Low growing vine/or scambler.

GROWTH AND FEATURES: In the wild, this plant is normally seen on the sides of hills that retain a covering of rocky rubble. This would help to keep the plants roots moist but well drained and at a fairly constant temperature. It grows as a vine, either scrambling along the ground or sometimes growing vertically on trees and rock faces. It will flower and fruit when very small. In all of the places I have seen this plant in the wild, it seems to prefer dappled shade.

FERTILIZER: As with all of my native plants, I prefer to fertilize with one of the processed chicken manures now readily available at most supermarkets and nurseries. Just add a handful every couple of months and then re-cover it with your stony rubble mulch.



Tagala Vine (*Aristolochia acuminata*)



(*Aristolochia* sp. D'Aguilar Range (=*A*. sp. aff. *pubera*)

WHY WAS THIS PLANT CHOSEN?: Of the host plants listed on our poster, this is the plant I have mainly seen them on in South-east Queensland. If your supply of Cressida Pipeflower runs out, as it inevitably will because they are such voracious feeders, then Tagala Vine (*A. acuminata*) is an adequate substitute.

Bob Miller

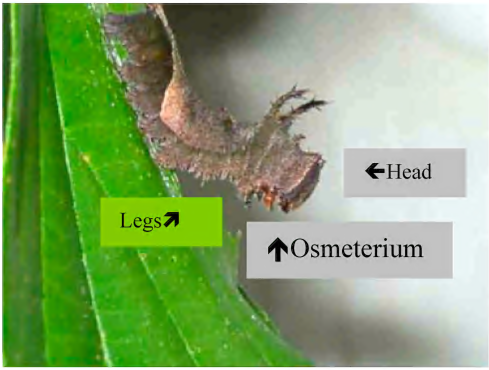
CREATURE NOTE

Osmeterium-type projection found on the larvae of the White-banded Plane (*Phaedyma shepherdi*)

Whilst moving several larvae of *Phaedyma shepherdi* from one set of food plants to another in a breeding facility, I noticed a slightly pungent smell. Upon closer inspection and quite a bit of poking and prodding, I noticed a fleshy protuberance coming and going from the underside of some of the larvae.

This protuberance, looking not unlike that of a telescope expanding and contracting, was positioned below and towards the front-end of the larvae and was obviously the source of the scent. Upon inquiries to Michael Braby, CSIRO, Division of Entomology, Canberra, I discovered that this had never before been noticed in any members of the Nymphalidae family.

Osmeteria are defence structures and have only previously been found in larvae of Papilionidae (ie Swallowtails).



Osmeterium on *Phaedyma shepherdi*
Photo supplied by Bob Miller

Bob Miller

President's Note: Bob wrote this note a number of years ago and his discovery was included in Braby's "Butterflies of Australia" on page 552. Congratulations Bob. It is great that Club members are making these significant observations. Keep up the good work.

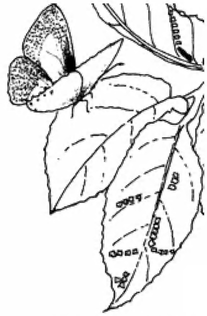
REPORT

Woodford Folk Festival (27 Dec – 1 Jan 2004)

For some years now work has been undertaken at the Woodford Folk Festival site to enhance the environment for butterflies. This has included the planting of hundreds of Birdwing vines (*Pararistolochia praevenosa*), the establishment of an innovative wetland butterfly habitat and developing a "Butterfly Walk" from the ticket selling tent leading up to the main festival entry gate. The “Butterfly Walk” showcases many of the local butterfly host plants.

The Club was invited by the Woodford Folk Festival organisers to hold an information stall on the “Butterfly Walk” at the Festival. Large photos of butterflies were attached to their corresponding host plants.

Two of us staffed the stall for the duration. This was a great exercise in that it gave us the opportunity to talk to many different people about butterflies. Our stall was situated near a creek line at the beginning of the walkway.


Common Moonbeam

During our stay at the festival we found larvae on a number of the plants along the Walk. We used these as a community education exercise, showing various interested people what was possible when you have the host plants. These larvae included the Common Pencilled Blue (*Candidalides absimilis*) on the Tuckeroo (*Cupaniopsis anarcardiodes*), Common Moonbeam (*Philiris innotatus*) on the Sandpaper Fig (*Ficus coronata*), a Palm Dart (one of two possible species) (*Cephrenes* sp.) on an unidentified palm, Pale Triangle (*Graphium eurypylus*) on the ZigZag vine (*Melodorum leichhardtii*).

Papilio fuscus capaneus

Many butterflies were on the wing during our stay. These included the usual suspects, namely White-banded Planes (*Phaedyma sherherdi*), Fuscous (*Papilio fuscus capaneus*) and Orchard Swallowtails (*Papilio aegeus*), Pale (*Graphium eurypylus*) and Blue (*Graphium sarepdon*) Triangles, Varied Eggflies (*Hypolimnas bolina*), Clearwing Swallowtails (*Cressida cressida*), Monarchs, (*Danaus plexippus*) Common Crow (*Euploea core*) among others.

We would like to see butterflies and other invertebrates become much more of a feature at the festival, and have been invited to participate further. Club members are welcome to become involved. Site maintenance is carried out on the last Sunday of each month. We are also intending to hold another stall during the next festival and would welcome help with this venture. If you are interested please contact Frank or Helen on 3844 6677.

Helen Schwencke

Maroochy River Conservation Park, Nojoor Rd, Twin Waters

Recently, while taking a few days off, I visited this park which abuts the Maroochy River and is rapidly becoming a pocket of remnant vegetation with the complete clearing of land and building of canal estates nearby. It comprises Melaleuca wetland, mangroves and some Acacia and Eucalypt habitats.

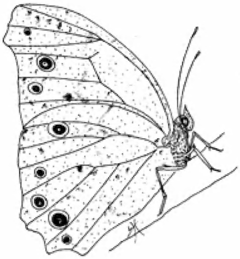
My short walk into the area proved delightful, with the area alive with a myriad of insects on the wing. Unfortunately there were also a few very undesirable ones and I came away with hives from sandfly bites. Oh for some repellant!

The day was warm and sunny and my visit occurred around midday. There was a lovely background serenade of low drumming and high trilling cicadas. Unfortunately I can never remember the names associated with the sounds. Alongside the insects there was a variety of bird calls. In the past I've seen Rufous Fantails in this area.

As I entered the tracks, along the roadside in the shade, a male Clearwing Swallowtail (*Cressida cressida*) occasionally fended off male Orchard Swallowtails (*Papilio aegeus*) and male Varied Eggflies (*Hypolimnas bolina*) in dogfights through the air.

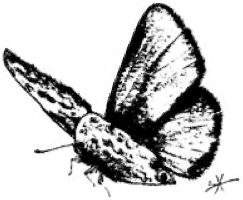
Small Green-banded Blue (*Psychonotis caelius*) females were happily laying on the Soapbush (*Alphitonia excelsa*) and took no notice of my proximity. Many and varied moths flew up as I disturbed the ground cover as I walked past. My disturbance also produced some Evening Browns (*Melanitis leda*). Large Grass Yellows (*Eurema hecabe*) were on the wing.

Lemon Migrants (*Catopsilia pomona*), some of which were of the very yellow form, and a number of large White Migrants (*Catopsilia pyranthe*) fluttered through the forest. (A White Migrant was even seen laying eggs in our inner suburban Brisbane garden recently, so numerous have they been this season.) Also seen were a number of Common Crows (*Euploea core*), without which a venture into South-east Queensland bush would seem incomplete.



Evening Brown

The most remarkable part of my small adventure were the masses of male Two-spotted Line-blues (*Nacaduba biocellata*), in perfect condition, patrolling through the ground cover in some spots or over the leaf litter under some old Mango trees. The shimmering lilacy-purple colour flittering above and through the groundcover was a sight to behold. There were hundreds if not thousands of the creatures. I found them in three closely co-located



Male Two-spotted Line-blue

patches, always in the shade with some dappled sun. Their activity stopped abruptly where there was full sun. They were largely on the wing, though, when I followed one for a while it would occasionally come to rest. Nearby the wattles were shedding their spent flowers. In one case some males were patrolling a conspicuous ant's nest at the base of a wattle. In about an hour of observations I found one pair mating. They were climbing up a short grass shoot out of the ground and then disappeared within moments of my spotting them. As the masses of these butterflies weren't puddling, or looking for water (there was some available on leaves on the ground) or didn't seem interested in nectar, I can only speculate that they were recently emerged males that were waiting for some females to emerge. The sight was a wonder to behold.

Helen Schwencke

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The not so elusive Four-barred Swordtail

About the middle of last year my brother and I purchased a block of land west, south west of Bundaberg. The land contains an area of dry vine scrub fronting a poor excuse for a river. The scrub has proved to be rich in diversity of its plants, and one of the many vines found there is *Melodorum leichhardtii*, one of the host plants for *Protographium leosthenes* (Four-barred Swordtail).

The Four-barred Swordtail is a butterfly I was not familiar with and I was looking forward to finding it on the block. A couple of trips were undertaken, mainly to find the extremities of the block and catalogue the plant life. John Moss accompanied us on these trips and many interesting discoveries were made, both plant-wise and insect-wise. Many species of butterflies were seen including the Cycad Blue (*Theclinesthes onycha),* one I had not seen before, but nothing could prepare us for the sight that awaited us in one of the creeks bordered by *Waterhousea floribunda* a tree in the Myrtaceae family. Moths! It would almost be a lie to say the moths were in the thousands as they had to be in the hundreds of thousands. The moth proved to be *Dichomeris capnitis*, of which there is little known. They formed dense clouds when disturbed and the branches holding the leaves they rested on would rise with relief, lifting up to two meters, the weight of the mass of moths was so great. But sadly in spite of inspecting many *Melodorum leichhardtii* there was no sign of the Four-barred or any evidence the larva had used them.

Four-barred Swordtail graphic computer generated by Peter Hendry

A four-day trip in late October also proved fruitless as far as finding the Four-barred was concerned. On the last day Ross Kendall joined us and on our return home we stopped at

Goodnight Scrub. It was here I saw my first Four-barred Swordtail. They were flying, although only a few, but at last I had seen one. The *M. leichhardtii* in the area had obviously been used and spent pupae were found of both the Four-barred and the Pale Triangle *(Graphium eurypylus*). This latter also uses *M. leichhardtii* as a host plant. I was now convinced the Four-barred did not occur on my block which was only 9.5km away as the crow flies from the Goodnight Scrub colony.

On the January long weekend I decided to look again, the middle of summer, if they were going to be there it would have to be now. The sole purpose of this trip was to see if the Four-barred was there, leaving late Friday afternoon I would meet with my brother on site, sleep overnight in the car, no time for tents etc and return home Saturday afternoon. Saturday morning, first up we visited a clearing that has some Lantana surrounding it and proved to be a good butterfly site on previous trips. Well the clearing was not so clear any more it was covered in Milkweed and a least three species of *Sennas* but the butterflies were there. First up the Monarch followed by the Blue Tiger, Lesser Wanderer, Lemon Migrant, Four-barred, yes it was here and not one or two but up to a dozen, mostly on the edge of the clearing and flying in and out of the adjoining scrub. The next stop was an area where the *Melodorum* was growing, no sign of larvae but the Four-barred was there, and so it was at every place we visited. Along the river, up on the hills, everywhere we visited gave us a sighting of the Four-barred. It proved to be one of the most common butterflies seen on the day. I had the pleasure to sit and watch it lay eggs on the freshest of new growth, the size of the vine was not important, some laid on new vines with only a dozen leaves. Other butterflies seen included the Pale Triangle, Clearwing, Fuscous and Orchard Swallowtail, Common and Purple Crow and the Bronze Flat. There were many others including whites and small blues. In one gully, while stepping over a hollow log, we disturbed about five hundred moths, *Speiredonia spectans.* These are the large dark moths that appear under your house or in the garage from time to time. Feeling very pleased with myself after finding the Four-barred on my block, at last, I returned home.

Monarch

The following Saturday morning John Moss and I visited an area of Tingalpa Creek about 15 minutes from home. Here we found many species of butterflies including the not often seen in these parts, Blue Argus and would you believe the Four-barred Swordtail. After traveling around 800km the previous weekend to see them here they were 15 minutes from home. On returning home John and I decided to compile a list of butterflies we had just seen (*see below*). We had no sooner finished when John looked up and said "What is that feeding on the Parsonia vine?". You guessed it a Four-barred, in my own garden and to add insult to injury on Monday I found Four-barred larvae along with Pale Triangle larvae feeding on the *Melodorum* growing in my garden.

It has been a fantastic summer for butterflies: not only am I seeing many different species, but some are in large numbers. I hope every one is enjoying the summer in spite of the heat and I hope the storms here in S.E. Queensland did not cause to many problems.

Peter Hendry

List of Butterflies recorded along Tingalpa & Buhot Creek corridor between 8:30am and 10am Saturday 31st January 2004. Compiled by John Moss and Peter Hendry.

Acraea andromacha	Glasswing
Appias paulina	Yellow Albatross
Catopsilia pomona	Lemon Migrant
Catopsilia pyranthe	White Migrant
Cepora perimale	Caper Gull
Cressida cressida	Clearwing Swallowtail
Danaus chrysippus	Lesser Wanderer
Danaus plexippus	Monarch
Doleschallia bisaltide	Leafwing
Elodina angulipennis	Southern Pearl-white
Euploea core	Common Crow
Euploea tulliolus	Purple Crow (Not a good sighting. Possible only)
Eurema sp.	Grass-yellow
Graphium eurypylus	Pale Triangle
Graphium sarpedon	Blue Triangle
Graphium macleayanus	Macleay's Swallowtail
Hypocysta adiante	Orange Ringlet
Hypocysta metirius	Brown Ringlet
Hypolimnas bolina	Varied Eggfly
Junonia orithya	Blue Argus
Junonia villida	Meadow Argus
Melanitis leda	Evening Brown
Papilio aegeus	Orchard Swallowtail
Papilio anactus	Dainty Swallowtail
Papilio demoleus	Chequered Swallowtail
Papilio fuscus	Fuscous Swallowtail
Polyura sempronius	Tailed Emperor
Protographium leosthenes	Four-barred Swordtail.

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FOREST OF DREAMS incorporating The Glowworm Research Centre at Springbrook

Welcome to the cosmos in miniature! When these little guys get together in great numbers and turn on their lights it's like looking at the sky on a clear night- it's the universe in miniature.

Glow-worms love the dark. They love living in total darkness 24 hours a day. The only reason they don't, in this part of the world, is that there are no natural caves. The closest thing we have to a cave in the hinterland is the rock overhang at Natural Bridge. However this is exposed to the daylight so the glow-worms switch off till nightfall.

At "Forest of Dreams" we have researched the glow-worms for years and now that knowledge has been used to reproduce all the necessary requirements to successfully recreate cave-like conditions so that the glow-worms at last have their paradise and you get the opportunity to see these little wonders at any time of day. In fact the conditions in our habitat are so to their liking that the population density is greater than you will see anywhere else in Australia or New Zealand

What is a Glow-worm?
The Glow-worm is the larval form of a flying insect by the name of *Arachnocampa flava*. The "arachno" part refers to the fact that the larva produce silk like a spider; the “campa” bit means that they are worm-like. There are four stages in the life cycle, ie. Adult, egg, larval and pupal stages.

The Adult Stage.
The adults are flies which have no mouth and so cannot eat causing them to run out of energy and die in just a few days. Their sole purpose in life is to reproduce. They do not glow.

How big are glowworms?
They grow to a length of 3 to 4cms (1.2 to 1.6 inches). They go through 5 stages of growth starting out life at a length of only 2 - 3 mm (0.1 inch) and so you will notice that the lights they emit vary in size and intensity.

Why do they glow?
They glow to attract small flying insects that they catch & eat. The tail end produces light that attracts the prey.

How do they catch their food?
As we said before they produce silk. They use the silk to make a horizontal web-like structure on which they live and from this web they drop "fishing lines" coated with a sticky saliva. The glow-worm switches on its light, the flying insects come to

the light and become ensnared in the lines. The glow-worm pulls up his fishing line and there's lunch.

Is the silk useable?

No, it is not the same kind of silk that a silkworm produces. It cannot be collected and used. When the glowworm becomes a pupa the silk is not maintained anymore and so breaks down and disappears quite quickly.

How long do they live?

This insect spends most of its life in the glow-worm stage. In the wild this averages about 12 months. The larva goes through 5 stages of growth and between each stage they moult their helmet-like head capsules. At the end of this time they pupate and after a week the adult emerges. The females live up to 2 '/z days - the males up to 6 days. The female lays approximately 130 eggs, which hatch in about 7 to 9 days.

How do they make the light?

Within special organs in the tail of their bodies they combine chemical elements :and enzymes to produce a bioluminescence that is almost pure light - This light is a greenish blue - the colour most easily seen by insects that are attracted to light. These are called phototrophic insects.

About bioluminescence.

Bioluminescence means light produced by a plant or an animal. It is not a heat based light like the sun or like light globes which are around 90% heat and only 10% light. Glow in the dark stickers and watches use a chemical combination, which is also very different to bioluminescence. There are lots of other species that use bioluminescence for different reasons. eg. fire-flies and rainforest fungi.

Are they like fire-flies?

Fire-flies are similar insomuch as they also generate bio-luminescence, but whereas the glow-worm uses light to attract food the fire-fly uses its light to attract a mate. It emits a pulsing light unlike the continuous light of the glow-worm. Actually the fire-fly is not a fly but a soft bodied beetle.

Does anything eat glowworms?

There are some small spiders that like to eat glowworms. The larval stage of an insect called the lacewing also likes them and 'Huntsman' spiders will chase down the adult flies. They are lucky and have friends which live close to them and help protect them. The trapdoor spider makes its home near the glowworms light hoping to grab some of the food as comes to the light. In return it protects the glowworm from predators.

The Centre can be contacted by: Ph: 55335195 Email: fod@glowworms.com.au
Website. www.glowworms.com.au **By "Forest of Dreams"**

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Further to *Jalmenus evagoras* translocation **Issue No 24 March 2002**

Ed. In November 2001 Martyn Robinson was shown a site in Kellyville NSW where a colony of Imperial Blue butterflies *Jalmenus evagoras* were soon to be bulldozed for new housing blocks. He relocated the nest (successfully it seems). Martyn has been keeping me up to date on the above so I will pass it on to you in the form of dairy entries

8th Nov., 2003 - On Saturday a colony of *Jalmenus evagoras* was found opposite the entrance to the Hornsby Model Engineers Co-operative on Mid Dural Road. They were found on *Acacia dealbata* saplings on the roadside cuttings and were heavily attended by *Iridiomyrmex* ants. A sample of these larvae, ranging from hatchlings to 5th instar, were taken back to Narraweena and placed on a sapling of the same Acacia species - the ants were already present from the previous *Jalmenus* transfer and readily accepted the larvae. Also interesting in that November is looking like the best time to search for larvae each year - at least in Sydney. Will keep you posted of the progress.

Jalmenus evagoras lifecycle showing attendant ants

24 Nov., 2003 - In the infamous Belanglo State Forest on Sunday 22nd Nov. in Acacia very similar to *A. dealbata*, I found *Jalmenus ictinus* larvae in several low saplings attended by the host Meat Ants *Iridomyrmex purpureus* The Caterpillars feed singly and are nowhere near as abundant as *J. evagoras* would be and have prominent green bellies. They do cluster loosely however when it rains and the ants may or may not tend them in rain.

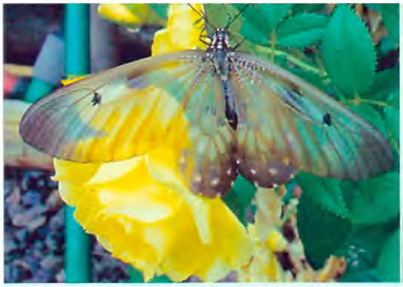
7 Jan., 2004 - The first generation this summer became butterflies over December and they tended to remain in the vicinity of the *Acacia dealbata* they were hatched on with the males chasing each other around and attempting to mate with any newly emerged or emerging females. A neighbor had planted a *Buddleija davidii* close-by and this seemed to be used as their nectar source. The first eggs noticed were around 14th Dec and from then 'till now females can be seen examining the ground for ants, or the stem for old pupal cases and then crawling up the trunk and laying in knot holes etc. Some of the egg clusters were

laid on the silk pads of the pupal cases. By Christmas there were no large caterpillars or pupae left on the sapling and the ants had left it. Some of the egg clusters appeared to have hatched but I could find no hatchling caterpillars and there were several Signal Flies (*Pogonortalis doclea*, Platystomatidae) which looked distinctly predatory near the egg clusters (NB they may have just been attracted to residues of sweet secretions as they are not known to be predatory but the careful examination of the stems with eggs and their quartering around the trunk looked suspicious) not to mention a sudden increase in the spider population on that shrub! Pruning of the upper branches and careful examination revealed one cluster of only 7 tiny orange larvae despite all the empty eggshells. I've suspected for some time that there might be a missing ingredient in the ecology of this species in my tree as the ants have no interest in either eggs or tiny larvae something must keep them visiting the saplings or all the next generation would be eaten by predators before they grew large enough to attract the ants again. Perhaps an overlap of generations or another honeydew source.
I went back to the site in Mid Dural Road on 28th Dec and checked out the Acacias there and found the ants tending green tree hoppers in the saplings where the larvae were tiny or absent. The ants were not as enthusiastic in tending them as they are the larger *J. evagoras* larvae but clearly they were getting something from them and were still visiting the saplings. The same hoppers were in the saplings with larger larvae but here the ants largely ignored them BUT the hoppers were resting close (either on the same stem just below or above the cluster - usually within 10 cm) to the clusters of *Jalmenus* larvae with several such clusters having two or more hoppers in attendance. Occasionally an ant would palpate the abdomen of a hopper and presumably get some secretion but mostly they just climbed over them to get to the larvae. I collected several of these hoppers and some larger larvae and took them home and put them on my garden Acacia. Using a large larva as 'bait' I lured some ants back onto the sapling and within a couple of hours the ants were swarming over the sapling again. By 3/01/04 numerous tiny larvae were observed climbing about the branches and stems - the flies were being chased by the ants and the spiders were absent from foliage containing larvae and ants. The hatchling grey larvae and the slightly older juvenile orange coloured larvae less than 4mm were largely ignored by the ants beyond perhaps a brief examination with the antennae. The reverse was not the case. The larvae tended to wander a little aimlessly until they found an ant trail then would purposely and rapidly travel with the ants until they reached a cluster of older larvae whereupon they would associate with them resting on the silken sheet beside them or crawling to the ends foliage they were feeding on. The smaller larvae tended to feed mainly on the tender new shoots and foliage while the larger ones fed on the older leaves. The ants were also interesting to watch as they would attempt to manipulate the direction the larvae travel in. Larger larvae were frequently gripped by one of the lateral tubercles

beside the head and hauled in one direction or another while they were in motion. The purpose behind this wasn't always clear but the ants tended to try to turn them in the direction of other larvae - possibly so that their honeydew source is concentrated in the one spot. Orange juvenile larvae of a size where the honeydew from them is of interest to the ants are also manipulated as to direction but in this case it is usually individual ants chasing errant larvae and prodding them with their antennae to try to turn them. In neither case are the ants always successful and sometimes larger larvae can be seen dragging clinging ants up a fresh stem that the ants didn't seem to want it going up. As the larger larvae move into new foliage the ants constantly stream up the stem to it and back to a main trail - presumably establishing a scent trail. They also run ahead and back of the advancing larvae to a distance of about 8 cm and attack any other insects or other potential predators in the path - spiders drop on silk lines and mantids hop to lower branches to avoid conflict. ***Martyn Robinson***

YOU ASKED

Dear Members,
My name is Kay Cotterell and I have only recently become a member of your club.
I have taken this photo recently and although I have purchased the Domino Australian Butterflies fold out, I have not been able to match this photo to any one of them.
As I am compiling the history of my property in pictures and journaling, I would appreciate any information you could give me.
When I read your recent newsletter I was excited to find that the hundred native lime trees on my property were useful to butterflies.
We have found our trees survived well in years of drought but produce very few fruit.
Happy Hunting, **Kay Cotterell**



Clearwing Swallowtail
Photo supplied by Kay Cotterell

Dear Kay,
The Butterfly is a female *Cressida cressida* from the Papilionidae family, commonly known as the Clearwing Swallowtail or Big Greasy. It is on the Domino poster on the top row next to the Red-bodied Swallowtail. What makes it hard to distinguish is the fact that the one illustrated is a perfect specimen, while in your photo the butterfly has lost many of its scales. It is common for the Clearwing Swallowtail female to loose her scales as she lays her eggs on vines in the genus *Aristolochia*, many of which, and in particular those found in open eucalypt forest and savannah woodlands, are small scrambling vines found close to the ground. This brings her wings into contact with

the ground or nearby vegetation causing the loss of scales. Many of the plants she will lay her eggs on are so small they will not support the full life cycle of the larva, and during their life will have to swap plants.

Hope this is of use to you, **Peter Hendry**

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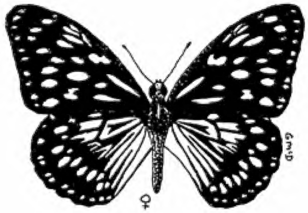
We have had a lot of Blue Tiger butterflies around this month (January) and we noticed several behaving strangely. They were spending quite a long time on the leaves of the Monkey Rope vine (*Parsonsia straminea*) and appeared to be scratching the leaves with their forelegs. Even when disturbed they returned to repeat the performance which resembled the behaviour of female butterflies testing a leaf for suitability as a host plant, which *Parsonsia* isn't for Blue Tigers. They weren't just confused were they? There must be a perfectly logical answer.

Lois Hughes



Blue Tiger
Sketch by Graham McDonald

Blue Tiger butterflies extract chemicals from Monkey Rope to use in attracting females in their mating rituals. If one looks carefully at individual butterflies it will be noticed that nearly everyone one of them has the black sex brand of the male on the wings. They also extract chemicals from the Blue Heliotrope (*Heliotropium amplexicaule*) which is a common roadside weed. In this case they use mainly the dead leaves of the plant. They wet the plant and then suck up the dissolved chemicals. During the current migration I saw hundreds of Blue Tigers massing on Heliotrope plants in shady places on the side roads near Lake Wivenhoe. The Common Crow and the Lesser Wanderer also collect chemicals from Blue Heliotrope. When weeding I save pieces of Heliotrope and hang them up under the house to dry. They then become attractive to the Common Crow butterflies in my garden. One day there were five butterflies on one small piece of Heliotrope. Plants in the genus *Crotalaria* are also said to be used in the same way but I haven't managed to grow any of the local native Crotalarias to check which species are actually used. Overseas species of the genus *Gynura* are also reported to be used. I have grown the local Rock Ledge Daisy (*Gynura drymophila*) and while I haven't noticed any use of the dead leaves the flowers are very attractive to Blue Tigers and Common Crows.

Frank Jordan

LETTERS

Dear Editor,

I would like to congratulate you on your articles about the butterfly regeneration project at Rockhampton by David St Henry with articles by Bob Miller and Les Ring.

I always thought of doing something like the Project, in fact actually started an idea on similar lines but health, domestic and financial problems intervened to cancel any chance of success.

I was always interested in the *Graphium* species and intensively reared the ones common in NSW coastal areas *G. sarpedon choredon* and *G. macleayanum*. Releasing them was always a pleasant chore for my children and later on for my grand children.

The seasonal variation in numbers seemingly common to all butterflies always intrigued me, so using *G. sarpedon* as an example I did quite a lot of research to see if I could find out why.

In the area I lived, the Central Coast of NSW, *G. sarpedon* is usually very plentiful. Why not, as it has adopted the ever present Camphor Laurel as its favoured food plant and yet some seasons there would be a lot more around than others. In fact it could have a factor in controlling Camphor Laurels which have been classed as weeds and as this was not happening I set out to find out why.

Conveniently near my place there was a country road, one straight stretch of it was lined with young trees and as they were trimmed frequently so there were generally plenty of young shoots favoured by the *sarpedons*. Young and active then, I set out and found larvae and eggs on only three of the trees which seemed unusual because there were a lot more that seemed suitable, more than that just one of the younger bushes had dozens of eggs and larvae on it with several butterflies actually laying. I took all the larvae and eggs home and put them in separate cages. 90% of the eggs hatched out and were all reared successfully but those larvae that had been collected were 100% parasitized by a Tachinid fly.

A few weeks later I went back to find that that small bush was still a favourite laying bush for the butterflies and although a lot of the foliage had been eaten there were still plenty of eggs and larvae on it. I had taken a chair so I sat down to watch and soon observed that there were at least half a dozen of the Tachinid flies flying around and landing on the bush some of them actually landing on the larvae.

My book told me that these flies (they looked very much like the ordinary blowfly) lay their eggs on the foliage and the larvae consume them. Although a coincidence, it seemed to me that they had some way of attracting the butterflies to lay their eggs on a food plant of their choice. Certainly they were acting as a control on the numbers of the insects. Some of your readers who live in the Coolangatta or Tweed area who may be interested in returning the declining butterfly population by breeding them should be interested in the problems involved. I am only too happy to help with advice from a lifetime of experience. They can ring anytime 02 6674 2023.

Yours faithfully,

Felix Jenkins

Note of Interest

I had this story from a Byron Bay resident who has passed on now and I cannot guarantee its authenticity. In the 1950-60 period an attempt was made to introduce the glorious Ulysses Swallowtail (*Papilio ulysses joesa*) from Cairns to the Tweed River area.

For a period the foodplant *Evodia accedens* (a handsome tree) was planted throughout the area. Then by arrangement with a northern collector forty pairs of the butterfly were released in this area. Unfortunately they just disappeared so the experiment was unsuccessful.

If the story is true it certainly left a beautiful legacy. The Evodia tree is growing throughout the area especially around Round Hill and along the Tweed River. Someone should try it again today with a much better chance, especially if they bred it in a cage and released over a period of years. ***Felix Jenkins***

Frank's Response

This introduction attempt was just one of many over the years. From discussions at my butterfly talks and club stalls many people have reported seeing this butterfly in South east Queensland. Many of these sightings would have been the result of introductions by individual travelers returning from up north. Some were the result of mass releases of captive bred butterflies. Older sightings at Redcliffe and more recent ones at Mt Coot-tha were probably in this category. Possession and movement of the Ulysses butterfly without a permit is illegal in Queensland and so it is very difficult to obtain concrete information about any introductions.

One thing that is beyond doubt is that all of these other introductions have been unsuccessful. This is surprising because so many of this butterflies' host plants are now planted in the area. However, I think that Felix's observations about Tachinid flies provide part of the answer. I have seen one Ulysses caterpillar produce over twenty Tachinid fly pupa and it would not take long to build up large numbers of these flies. This is one reason not to introduce these butterflies. If successful the increase in Tachinid flies could depress the numbers of our local butterflies.

Another reason for the lack of success might be that it gets too cold for the butterfly in winter. Many northern butterflies breed in SEQ in summer but return to the north in winter. Several years ago a long-time resident of Bribie Island told me that there were Ulysses butterflies on the island in the 1920's. The kids decorated their jewelry boxes with the wings. Unfortunately I have been unable find any other references to this or any photos or old jewelry boxes. However several host plants of the Ulysses butterfly occur naturally on the island and the warmer maritime climate on the island may have allowed the butterfly to survive the winter.

Frank Jordan

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A North Coast member has advised that it was reported in a local paper that a mass planting of the Richmond Birdwing Vine (*Pararistolochia praevenosa*) has been undertaken at Point Cartwright. The project's first stage, funded by Cr. Andrew Champion, saw 100 vines planted and watered. Follow-up watering is needed, so if any of our members in the area can spare one hour a week (hoses supplied by Council) please contact Cr. Champion on 5444-5111. Another planting is planned in the near future.

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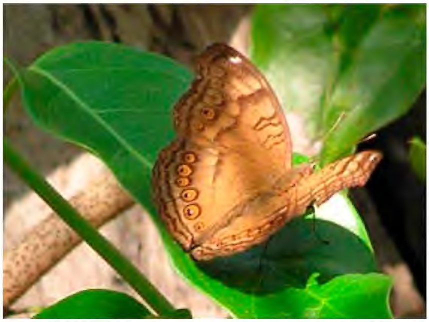
I was at Lake Macdonald near Cooroy on Friday and found a Brown Soldier. It's an unusual butterfly to be seen up here on the Sunshine Coast, and I've not seen one before. It was seen in the same spot for the first time two years ago.

Regards **_Bob James_**



Brown Soldier
Photo supplied by Bob James

The Brown Soldier is not common down here mainly because its host plant (*Hygrophilla angustifolia*) is becoming very scarce now. I think the previous southern record was a swamp near Southport which local folklore now says is the site of the Casino. The location at Lake Macdonald is the result of the infestation of an exotic species called *Hygrophilla costata*. It is very weedy and has been declared a class 1 weed and should be eradicated on sight. Until that happens the Brown Soldier (Chocolate Argus) should remain a familiar sight in the area. I have included *Hygrophilla angustifolia* in the butterfly walk at the Woodford Folk Festival site and it is doing remarkably well there. Hopefully this will encourage people to grow this native instead of that pesky exotic. Cheers **_Frank_**

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A note from Martyn in Sydney - We had an interesting influx in Sydney over the last month with Blue Tigers, Common Eggfly, Lemon Migrants, Common Albatross, and Lesser Wanderers all being seen. Plumbago Blues are just appearing now in the areas I frequent and the *Cephanodes kingii* have been in evidence for a while.

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A friend of mine is involved with Tin Can Bay City Farm, (a Landcare organisation that propagates native plants), having great success recently with Betony Leaved Violets *(Viola betonicifolia)*, and was enquiring as to whether I knew of any butterfly enthusiasts who may wish to purchase quantities of these. Their contact details are - Susy & Peter Pickin, 4 Cerebus Court, Cooloola Cove 4580 Ph 54 864832 E-mail

Regards, Kelvin & Amelia Nielsen, COOLOOLA NATURE Education

Address: pickin@spiderweb.com.au

WORLD WIDE WEB SITES TO WATCH

http://linus.socs.uts.edu.au/~don/larvae/larvae.html
http://www.geocities.com/pchew_brisbane/index.html
also please note a change of address for our Club site to www.connectqld.org.au/boic

YOUR CLUB'S MEMBERSHIP DIRECTORY

In February, 2002 your Club's organising committee decided to start encouraging members to network with each other in their local areas, and across their areas of interest. To this end we have now produced a membership directory. Only those members who have given us their permission have been included in the directory.

If you would like to be in a future issue of the directory please email Daphne at bowden@itconnect.net.au or phone: 07 3396 6334

LIBRARY BOOKS FOR LOAN

The following books are currently available for loan at meetings:-

Australia's Butterflies, by Peter Wilson
Butterfly Magic, by Helen Schwencke and Frank Jordan
Australian Cicadas, by Max Moulds
Butterflies of Australia, by Common and Waterhouse, 1981
Butterfly Watching, by Paul Whalley
Flying Colours, by Mike and Pat Couper
All Colour Book of Butterflies, by Robert Goodden
Lifecycle of the Ulysses Butterfly, Video, by Janet Richardson
Lifecycle of the Cairns Birdwing Butterfly, Video, by Janet Richardson
Bugs, Beetles, Spiders and Snakes by Ken Preston-Mafham, Nigel Marven and Rob Harvey
Collecting, Preserving and Classifying Insects by Queensland Museum
Australia's Insect Life by Peter Wilson
Butterflies of Australia by I.F.B. Common and D.F. Waterhouse. This is a 1981 reprint

AVAILABLE FROM BOIC

Grow More Butterflies –
A selection of articles published in previous Newsletters $3.30 plus $1.10 postage

Butterfly Gardening –
A series of articles published in previous Newsletters $2.20 plus $1.10 postage

Butterfly Host Plants of SE Qld. and Nth. NSW –
A comprehensive list of host plants for this region $5.50 plus $1.10 postage

The **Butterfly Alphabet Poster** which shows all the letters of the alphabet and numerals 1-9 appearing in the wings of butterflies and moths. This poster can be viewed by visiting www.butterflyalphabet.com
Cost: Non-members $25 plus $5 postage Members $23 plus $5 postage

The **Domino Poster** - A guide for field, school or garden with 250 Australian butterfly illustrations in colour
Cost: Non-members $10 plus $1.10 postage Members $8 plus $1.10 postage

Poster -**Lifecycles of the Swallowtail Butterflies of South East Queensland**, compiled by the BOIC
Cost: Non-members $10 plus $5 postage Members $6 plus $5 postage

These items can be obtained from BOIC, PO Box 2113, Runcorn, 4113.

BACK ISSUES

Back Issues of the Club Newsletter are available at a cost of $2 each plus postage (1-2 copies $1.10 - 3-6 copies $1.50).

ADS AND EXCHANGES

For Sale: Pair of new Pentax 10 x 42 binoculars ideal for bird, butterfly and wildlife watching. Excellent optics made in Japan. Includes padded case, strap, protective lens covers, owner's manual. Also included is a harness strap for extended use (normally +$20). Packaged in box. New price around $600, sell for $360. ph. 3378 5467

OTHER GROUPS' ACTIVITIES

Take up the challenge................
The 2004 Wildlife Photographer of the Year competition closes on 2 April. If you are interested, check out the web site below and click on 'information' for an entry form.
http://internt.nhm.ac.uk/cgi-bin/wildwin/2003/index.html

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Society for Growing Australian Plants : Autumn Plant Sale
When: Saturday 1st May 2004, open from 9.00 a.m. to 3.00 p.m.
Where: TAFE Grovely Campus, off Casey Street, Keperra. Admission free
What: The sale includes hundreds of species of native plants provided by members of the Society for Growing Australian Plants in south-east Queensland. Some plants are rare and in

short supply. There are choice native plants for the suburban or country gardener, rainforest plants, bush tucker plants, butterfly food plants, regeneration tubestock, and many, many more. There is a plant to suit every garden and situation. This can be a good place to find those hard to obtain butterfly host plants.

BUTTERFLY AND OTHER INVERTEBRATES CLUB PROGRAMME

Laidley Garden visit

When: Saturday, 20th March, 2004, 1:30pm – 4:30pm
Where: see December Newsletter
What: Visit to A local garden and local vine scrub remnants
Bring: Your own afternoon tea, insect repellent, wear long trousers & long sleeves
Contact: Helen 3844 6677 or email hschwenc@dovenetq.net.au to RSVP

Annual General Meeting

When: Saturday, 3rd April, 2004 2:00 – 4:00pm
Where: IndigiScapes Centre, Runnymede Road, Capalaba (2003 UBD Map 204 Ref L5)
What: The AGM will be followed by afternoon tea and show & tell, bring creatures you've found in your garden, local bush or that you have raised. Videos of butterfly lifecycles will be available for viewing.
Contact: Daphne 07 3396 6334 or email bowden@itconnect.net.au to RSVP or for more details

Planning and Management Meeting

What: Our planning meetings are informative and interesting. As well as planning our activities we share lots of information. All members welcome.
When: Wednesday 5th May, 2004 at 7.00 pm
Where: To be advised on RSVP
Contact: Daphne 07 3396 6334 or bowden @itconnect.net.au to RSVP or for more details

Visit to Jacob's Well Environment Education Centreand a member's butterfly house in Beenleigh

When: Saturday 29th May from 1 pm to 4.30 pm
Where: Contact John Moss for details about a week before visit
What: We will see mature Richmond Birdwing vines, butterfly host plants and a plant nursery
Bring: Your afternoon tea if you require it. Sunscreen and insect repellant may also be useful.
Contact: John Moss 3245 2997

Visit to Frank Jordan & Helen Schwencke's butterfly garden

When: Sunday, 20th June, 10am – 12 noon
Where: West End. Numbers are limited to 15. Location provided upon booking.
What: Helen & Frank's 400 sq m suburban block has over 60 species of host plants. 43 species of local butterflies have been recorded as breeding in their backyard.
Bring: Morning Tea (if you require it)

Contact: Helen 07 38446677 or email bowden@itconnect.net.au

If you plan to attend any of the above events please contact the person indicated in case, for some unforeseen circumstance, the event has had to be postponed or cancelled.

DISCLAIMER

The Newsletter seeks to be as scientifically accurate as possible but the views, opinions and observations expressed are those of the authors. The Newsletter is merely a platform for people to express their views and are not necessarily those of the BOIC. If inaccuracies have inadvertently occurred and are brought to our attention we will seek to correct them in future editions. The Editor reserves the right to refuse to print any matter which is unsuitable, inappropriate or objectionable and to make nomenclature changes as appropriate.

ACKNOWLEDGMENTS

Producing this newsletter is done with to the efforts of:

- Those members who have sent in letters and articles
- Lois Hughes who provides illustrations including the cover
- Daphne Bowden who works on layout, production and distribution
- John Moss for scientific referencing and proof reading
- Helen Schwencke who developed the overall design

We would like to thank all these people for their contribution

ARE YOU A MEMBER

Please check your mailing label for the date your membership is due for renewal. If your membership is due, please renew as soon as possible.

Membership fees are $12.00 for Individuals/Schools and $17.00 for family membership.

Would you please advise bowden@itconnect.net.au if you get/change an email address.

Butterfly and Other Invertebrates Club Inc.
c/- PO Box 2113
RUNCORN Q. 4113

Next Meeting: **Laidley Garden visit** Saturday, 20th March, 2004, 1:30pm – 4:30pm